REMARKS/ARGUMENTS

Status of the Claims

Claims 1- 24 were pending and are canceled herein without prejudice. Claims 25-31 are newly presented. After entry of these amendments claims 25-31 will be pending.

Support for the Amendments to the Claims

New claim 25 recites:

> A method of treating an autologous cell preparation for reinfusion into a patient, the method comprising contacting the preparation *ex vivo* with a recombinant replication-incompetent retrovirus containing a nucleic acid encoding a gene product of a wild type tumor suppressor gene, wherein the cell preparation comprises a mixed population of tumor cells deficient in the expression of the wild type tumor suppressor gene product and normal hematopoietic progenitor or blood cells, and wherein the contacting transduces the tumor cells to suppress the hyperproliferative phenotype of the tumor cells.

Support for the recital of "A method of treating an autologous cell preparation for reinfusion into a patient" is found in the specification *inter alia* in the paragraph bridging pages 4 and 5. Support for the *ex vivo* recital is found *inter alia* in original claim 12. Support for the recital of a " recombinant replication-incompetent retrovirus containing a nucleic acid encoding a gene product of a wild type tumor suppressor gene" is found *inter alia* in the specification at page 9, line 30, in the paragraph bridging pages 8 and 9, and original claims 1 and 6. Support for the tumor suppressor gene subject matter is also found in the specification *inter alia* in the paragraph bridging pages 12 and 13 and original claim 2. Support for the subject matter of "wherein the cell preparation comprises a mixed population of tumor cells deficient in the expression of a wild type tumor suppressor gene and normal hematopoietic cells" is found in the specification *inter alia* in the paragraph bridging pages 11 and 12, and particularly at page 12, lines 13-19. Support for the recital of subject matter "wherein the contacting transduces the tumor cells to suppress the tumor cell phenotype of the tumor cells" is found in the specification *inter alia* at page 12, first full paragraph and in original claims 10 and 11.

Support for the subject matter of claim 26 is found *inter alia* in original claim 11.

Support for the subject matter of claim 27 is found *inter alia* in original claim 7.

Support for the subject matter of claim 28 is found *inter alia* in the specification in the paragraph bridging pages 11 and 12 and particularly on page 12, lines 4-19, as well as in original claim 4.

Support for the subject matter of claim 29 is found *inter alia* in original claim 7.

Support for the subject matter of claims 30 and 31 is found *inter alia* in original claim 3.

In view of the above, the Applicants believe the new claims add no new matter and respectfully request their entry.

Response to the Restriction Requirement

Without acquiescing as to the merits of the Restriction Requirement, Applicants elect with traverse Invention IA (i.e., retinoblastoma, *ex vivo* contacting subject matter). Applicants further elect the species of leukemic cells. In the event that a claim generic with respect to the hyperproliferative cell type is allowed and pursuant to MPEP § 806.04(d), Applicants would request that dependent claims setting forth species of hyperproliferative cells (e.g., prostate, thyroid, breast, colon, lung, sarcoma, lymphoma, and leukemic cells) also be allowed.

Applicants respectfully traverse the Restriction Requirement with regard to the tumor suppressor gene subject matter (Inventions designated I - IV). The courts have long held that an Examiner may not reject a particular claim on the basis that it represents "independent and distinct" inventions. *See, In re Weber*, 198 USPQ 328, 331 (CCPA 1978); *In re Haas*, 179 USPQ 623, 624-625 (*In re Haas I*) (CCPA 1973) and *In re Haas* 198 USPQ 334-337 (*In re Haas II*) (CCPA 1978).

The courts also have definitively held that the section of the patent statute that authorizes restriction practice, *i.e.*, 35 U.S.C. 121, provides no legal authority to impose a

Restriction Requirement on a single claim, even if the claim presents multiple independently patentable inventions. *See, In re Weber, In re Haas I, In re Haas II.* In the cases set forth above, the courts expressly held that there is no statutory basis for rejecting a claim for misjoinder, despite previous attempts by the Patent Office to fashion such a rejection. As noted in *In re Weber*:

> "The discretionary power to limit one applicant to one invention is no excuse at all for refusing to examine a broad generic claim—no matter how broad, which means no matter how many independently patentable inventions may fall within it." 198 USPQ 328 at 334.

In a case such as this, where a claim is generic, a Restriction Requirement is tantamount to a rejection of the claim. As stated by the CCPA in *In re Haas I*:

> "We find that the action taken by the examiner did in fact amount to a rejection. . . . Those claims were withdrawn from consideration not only in this application but prospectively in any subsequent application because of their content. In effect there had been a denial of patentability of the claims. Presumably only by dividing the subject matter into separate, and thus different, claims in plural applications could an examination of the patentability of their subject matter be obtained." 179 USPQ at 625.

If the instant Restriction Requirement is allowed to stand, Applicants will never be accorded the basic right of the applicant to claim his invention as he chooses. *In re Weber*, 198 USPQ at 331. In *In re Weber*, the CCPA stated that "[a]s a general proposition, an applicant has a right to have *each* claim examined on the merits" (198 USPQ at 331, emphasis in original). The Court went on to state that:

> "If . . . a single claim is required to be divided up and presented in different applications, that claim would never be considered on its merits. The totality of the resulting fragmentary claims would not necessarily be the equivalent of the original claim. Further, since the subgenera would be defined by the examiner rather than by the applicant, it is not inconceivable that a number of the fragments would not be described in the specification." 198 USPQ at 331.

Even if Applicants file a divisional application to obtain coverage of the methods of delivering the various species which were the subject of the Restriction Requirement, they would not have the opportunity to have their genus claim examined.

MPEP § 803.02, citing this case law, makes clear that when a claim includes a Markush group that contains a number of arguably unrelated inventions, a ***species*** election is proper, not a Restriction Requirement. Accordingly Applicants respectfully request that the Restriction Requirement be modified accordingly.

Pursuant to 37 C.F.R. § 1.144, Applicants reserve the right to petition for review of the Restriction Requirement at any time prior to appeal. Applicants also note that the issue of whether a single claim can be restricted into different groups is appealable to the Board of Patent Appeals.

In view of the above, Applicants request that the Restriction Requirement be reconsidered and modified. If the Examiner is so persuaded, Applicants would instead elect *ex vivo* as the contacting subject matter, retinoblastoma as a tumor suppressor gene *species*; and leukemia as a tumor cell *species*.

THE CLAIMED INVENTION

The claimed invention provides an *ex vivo* method for purging or depleting tumor cells having a hyperproliferative phenotype from an autologous cell preparation for reinfusion into a patient. The methods involve contacting a mixed population of normal hematopoietic progenitor or blood cells and tumor suppressor gene expression-deficient tumor cells with a retroviral vector that contains a gene that encodes the tumor suppressor gene product. Surprisingly, the methods are effective even in the absence of a selection step to ensure that all tumor cells are infected with the retroviral vector.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 925-472-5000.

Respectfully submitted,

Frank J. Mycroft
Reg. No. 46,946

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 925-472-5000
Fax: 415-576-0300
Attachments
FJM:fjm
60135561 v1